DEVELOPMENT OF SKILL TEST FOR UNDER 21 AGED GROUP VOLLEYBALL PLAYERS IN MAHARASHTRA

Synopsis submitted to

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1. Introduction:-

Physical Education had lost its relevance in the last few decades due to various reasons. But now the scenario is changing, due to the scholarly efforts of many Physical Education professionals, Physical Education has obtained a status now. The Education Boards have made it mandatory for the Physical Education Teachers to conduct the Physical Education Programmes by undertaking theory as well as practical exams. An allotment of 50 marks to Physical Education has brought great relevance to Physical Education as a subject. The School Authorities and Physical Education Teachers, who were taking Physical Education for granted, have understood the importance and need of the subject due to the change in its syllabus and curriculum. As a result, various new activities are being included in Physical Education.

Yoga and Karate, activities with much recent interest, date back to ancient oriental societies. Yoga, an activity involving exercises of posture and regulated breathing, was popular and common in India. This disciplining of the mind and body, required the instructions of experts and a person fully trained in this activity followed a routine involving eighty four different postures. Buddha's prohibition of games, amusements exercises in ancient India did not totally prevent participation in such activities. The Indian physical activities such as Chariot Races, Riding Elephants and Horses, Swordsmanship, Wrestling, Boxing, Kabaddi, Kho-Kho, Atya-Patya, Dancing, Dand- Baithaks, Malkhamb, Lezium, Lathi, etc. have been in practice from time immemorial. But neither the names of the inventors of the Indian system of physical culture, nor the dates of the origin are known. Yet we are aware of the fact that a scientific system of Physical Education was in existence in India and was practiced by the people.

Physical Education has emerged from the clutches of mass PT, drill and marching, etc. The trend, that Physical Education is nothing but Sports, Games or Yoga has also changed. Now the actual need has been felt to know the aims and objectives of Physical Education. So, the present activities are evolving with time and at the same time, new activities are being introduced in the new syllabus.

During British period, the entire system of physical education deteriorated to unexpected levels. The indigenous weapons and activities of the Akharas and Vyayamshalas were prohibited in this era. The Western Civilization influenced Indians so greatly that the youngsters developed an aversion towards indigenous activities and kept themselves away from Akharas and Vyayamshalas. During the British rule, the German system of Gymnastics was adopted and introduced in the Educational Institutes but it could not attract masses due to some prevailing problems. Drills and Calisthenics were also introduced in schools to create interest and promote larger participation of students in these activities, but were not very successful. Outdoor games like Cricket, Football, Hockey, etc. were popularizing in India. British government's policy put emphasis on the practice of physical training in schools only for name sake. The real credit for propagating Physical Education goes to the voluntary organizations, Vyayamshalas, Kridamandals and Akharas by contributing in development of interest in physical activities like Dands-Baithaks, Yogic Exercises, Folk Dancing, Wrestling, Lathi Exercises and Indigenous Games like Kho-Kho, Kabaddi, etc. People with interest, practiced these sports during their free time. During school hours, some military drills and exercises were conducted by some ex-army personnel. Schools which followed the British system of Physical Education had separate Physical Education periods, but greater emphasis was given to western types of sports and games and not to indigenous activities.

The field of Physical Education and Sports has seen many ups and downs since then. Physical Education and Sports were made compulsory in Schools and Colleges. With the growing need for excellence in academics, the field of Physical Education and Sports was being neglected. Due to the efforts of many scholars and people with the liking for physical activities and a view to see the whole India fit, today Physical Education has a status Now, The Physical Education teacher has to conduct these activities as a part of the syllabus. Sports being an important part of Physical Education, various games and sports are taught to the students. Ball games are the most popular of all the various sports introduced in Physical Education classes. Sports such as Basketball, Football, Volleyball, Handball, Netball, Korfball are amongst the popular games in urban India. Of all the above-mentioned games, Korfball is a relatively new game in India and growing in popularity. Its recreational value and states of enjoyment has drawn the attention of both male and female

players at the professional level. Korfball has always been considered as a game of perception, timing, accuracy and agility along with a high level of fitness. It is an exciting and challenging game. Korfball has attained an impressive level of popularity in the international arena in competitive sports. Our Indian athletes also represent National and International competitions in this game. A great number of youths belonging to various Colleges and Universities in India participate in this game at the Intra and Inter University Competitions. Although "Volleyball" is popular among the Indian games and sports, there are no standard selection criteria for searching the sports talents. However, professional achievements in this sport need research- based support, which is the need of the day and hence the study.

1.1 Need and Importance

- Sports teachers and coaches of "Volleyball" generally use simple observation selection criterions, which consumes more time and are inaccurate too. This development of tests will help them to evaluate players easily.
- The development of these skill tests will help predict a player potentially for top performance in "Volleyball".
- This study has further scope in dealing with different levels of players.
- This study will also enable the Volleyball players to realize their own level of performance and such awareness which will definitely help in improving their overall skill in game situations.

1.2 Explanation of the problem:-

In the game of volleyball various tests and tests batteries are available which measures the skill like AAPHARD, Brady and SAI. Literature review has shown that research has been done for test development in Volleyball, but very little research material is available on selected volleyball skills like Service, Upper Hand Pass or Setting Skill & Under Hand Pass. The researcher himself, a University and state level Volleyball Player and coach sees these as a problem. So for the selection purpose and the development of skill of volleyball players which is developed by using research methods, the researcher has decided to

conduct the study **"Development of skill test for male volleyball players from Maharashtra."**

1.3 Objective

1) To develop jump and service skill test in volleyball.
2) To develop an Underhand Pass skill test in volleyball.
3) To develop an Upper hand pass/setting skill test in volleyball.
4) To establish validity of the skill tests.
5) To establish reliability of the skill tests.
6) To establish objectivity of the still tests.

1.4 Assumption

1) All players, coaches will cooperate for study.
2) Subject will give proper response for the test.

1.5 Delimitation of the study

1) This study is delimited to male Volleyball players.
2) The geographical area of the study is to be confined within the Maharashtra state only.
3) This study is delimited to selected skills only.

1.6 Limitations of the Study

The following problems that may appear during data collection for the research are listed below.

1. The researcher will depend upon some professionally qualified assistants this will be considered it as a limitation of this study.
2. As the subjects participating in this study belong to various clubs and geographical conditions, therefore factors such as diet, nutrition may be different and will not be controlled.
3. The training given to the selected subjects by their coaches will not be taken in to

consideration for this study.

1.7 Operational Definition:-

1) **Volleyball players: -** For the study those players who will represent their respective districts in the various state championship organized by MSVA will be considered as volley ball players
2) **Skill test**:- For this study Skill test means a tool developed for the collection of performing skill test data of volleyball players.

2. Review of the literature

Gabbett and Georgieff conducted a study to develop a skill assessment for junior volleyball players and to evaluate the reliability, validity, and sensitivity of the test for detecting training induced improvements in skill. For the study thirty junior volleyball players (mean ± SD age, 15.5 ± 1.0 years) participated in this study. Subjects performed tests of spiking, setting, serving, and passing skills on 2 separate occasions to determine test–retest reliability of accuracy. Two expert coaches evaluated the players' technique and reevaluated it 1 month after the initial evaluation to determine the intra tester reliability for technique measurements. A third expert coach determined the inter tester reliability for technique measurements. The validity of the test to discriminate players of different playing abilities was evaluated by testing junior national, state, and novice volleyball players. Finally, each player participated in an 8-week skill-based training program. Accuracy measurements and intra tester and inter tester ratings of players' technique proved to be highly reproducible (intra class correlation coefficient, *r*, .85 to .98, range of typical error of measurement 0.2% to 10.0%). A progressive improvement in skill was observed with increases in playing level, while training-induced improvements were present in all skill tasks. These results demonstrate that skill-based testing offers a reliable method of quantifying development and progress in junior volleyball players. In addition, the skill-testing battery was useful in successfully discriminating playing ability among junior volleyball players of varying levels, and it was sensitive to changes in skill with

training. These findings demonstrate that skill-based testing is useful for monitoring the development of junior volleyball players (Gabbett & Georgieff, 2006)

Christian constructed and evaluated of a soccer skill test. The purpose of this study was to construct a valid, reliable, and objective test battery to measure the soccer skills of passing, shooting, and heading. Forty-five male students were administered the soccer test battery. Fifteen subjects were selected randomly from each of the following sub-groups: The Appalachian State University (A. S. U.) varsity soccer team, A. S. U. intramural divisional championship teams, and A. S. U. physical education soccer classes. The criterion measures were judge's ratings according to subject's performance in passing, shooting, and heading during actual games played at A. S. U. The rater agreement (R=0.85) was determined with an intra class correlation coefficient using ANOVA techniques. The reliability and objectivity coefficient, which were determined with an intra class correlation coefficient using ANOVA techniques ranged from 0.90 to 1.00. Construct validity for each test was established using ANOVA for the known differences among performance groups. Resulting F ratios were significant at the 0.01 level for each test performance when broken down by groups. The contrasted mean score differences obtained for the three distinct groups supports the assumed constructs of passing, shooting, and heading as logical and statistically valid measures for men's soccer playing ability. Therefore, the soccer test battery appears to be a valid, reliable and objective assessment of passing shooting, and heading skills for men's soccer. (Christian, 1985)

Poteat(1985) developed a skill test to determine a racquetball playing ability of male and female college students. 54 males and 53 females from beginning racquetball classes were administered 2 trails of the test. 43 subjects were then-co-administered the test to determine stability reliability. All items in the skill test battery were found to have moderate to high internal consistency reliability, stability reliability and concurrent reliability. A panel of 3 experts on predetermined criteria evaluated 48 subjects. The 'r' of the individual test battery items and the corresponding score by the expert were high (r=0.75-0.84). The 'r' among the test battery items suggested the jail test battery should contain the following items: back wall forehand shot, back wall back hand shot, serve and wall rally.

Nirmala (1985) constructed an objective skill test in hockey for Higher Secondary School girls. Three test items namely "Shooting accuracy, hitting and stopping accuracy" were tested on 44 girl's students of senior secondary school aged between 13 to 17 years. The scientific authenticity of the test was established by computing reliability, administering the test on two different occasions by the investigator herself and the co –efficient for shooting accuracy were 0.68, 0.95 and 0.86 respectively. The validity was obtained by comparing the test result with the expert's opinion during the playing situation and was found 0.92 of all three test items.

Gromer (1987) designed a battery of tennis skill tests and studied the reliability and validity. The tennis skill test battery consisted of a forehand-backhand test and a serve speed/accuracy test. Special court markings and special equipment were not necessary for test administration. The subjects were 189 male and female college students who were enrolled in combined beginner and intermediate tennis classes at the University of Texas at Arlington. Subjects participated in the round-robin tennis tournament after 6 weeks of tennis instructions. The subsequent ranking obtained from the tournament served as the criterion for the validation of the test battery. The Pearson method was used to correlate test score with rank for determination of test validity. This method was also employed to compare test scores with retest scores for the reliability study. Results showed the tennis skills test battery to be both reliable and valid.

Loure& Chaw,(1992) Analyzed selected Badminton skill test battery. This study was designed to examine the factor structure of the badminton skills in the domain of human motor performance. Subjects for the study were 105 college students including 58 males and 47 females. They were required to complete 10 different skill tests which possessed acceptable reliability and validity determined by the primarily test developers and those selected tests were suggested by the concurrent tests and measurements textbooks in Physical Education. The data were investigated by various factor analysis models, including principal components analysis, unweighted least square analysis, maximum likelihood analysis and alpha factor analysis and followed by both orthogonal and oblique rotations of the 10 selected items, 7 were able to formulate 3 common factors namely,

‘Long serve’ ‘short serve’ and ‘overhead stroke’. The present result enabled the researcher to scientifically identify at least 3 important skill components in playing Badminton which may help in the development of a complete Badminton skills test battery. However, the identified components revealed that the use of all wall volley techniques in testing badminton skill was eliminated from the factor structure. Because of the modern graphical made rackets, the shuttlecocks are being stuck at a faster speed with greater power, further researcher may need to re-examine the reliability and validity of using wall volley methods in testing badminton skills.

Han-Dauyau(1999) designed a battery of badminton skill tests. The purpose of the study was to construct criteria- referenced of the badminton test battery. The subjects were the 223 players of first and second level athletes in the Badminton Association of the Republic of China. Pre approach of logistic regression model was used as selecting the best test battery of criterion entered test in Badminton. The domestic expression education is logic (P)=-22.22+0.05x push shot test+0.03x drop test + 0.06 x standing long jump test+ 0.02 x muscle strength test. The best of score (criterion) is 0.52 empirical approaches to create validation or the phi (p) co-efficient 0.53 and cross validation 0.80 in criterion- retrenched measurement as well as to create it’s reliability of the agreement proportion 0.83, Cohen kappa 0.53 and mediated Kappa 0.65 in criterion entranced measurement.

3 Methodology

For this study the researcher will use normative survey method. This is a descriptive survey study.

3.1 Population:-

The study will confine to the state of Maharashtra only. For this study senior volleyball players from Maharashtra State Volleyball Association will be used as a population. Sample will be collected from Pune, Mumbai,Kolhapur, Nashik, Aurangabad, ,Nagpur District.

3.2 Sampling:-

For this study purposive sampling method will be used. Minimum 1 year experienced Volleyball players will be selected for the study.

3.3 Procedure of study

The construction criteria of physical fitness test development resemble in general with that of sports skill tests. This is because both sports skill tests and physical fitness tests are the forms of psychomotor tests. However, depending upon variation in the specific objectives and differential skills, one has to follow somewhat specific steps for the construction of tests.

Step I	Determining the purpose and format.
Step II	Reviewing criteria
Step III	Analyzing sport to be tested.
Step IV	Reviewing literature
Step V	Selecting test items
Step VI	Acquiring facilities and equipments
Step VII	Establishing procedure.
Step VIII	Conducting a pilot study.
Step IX	Administration of revised test items
Steps X	Finding validity, reliability and objectivity

3.4 Data Collection tools:-

For this study the researcher will develop skill test for volleyball players and will be used for the data collection. The tentative structure of skill tests as given below:

1) **Jump and Service Test:-**

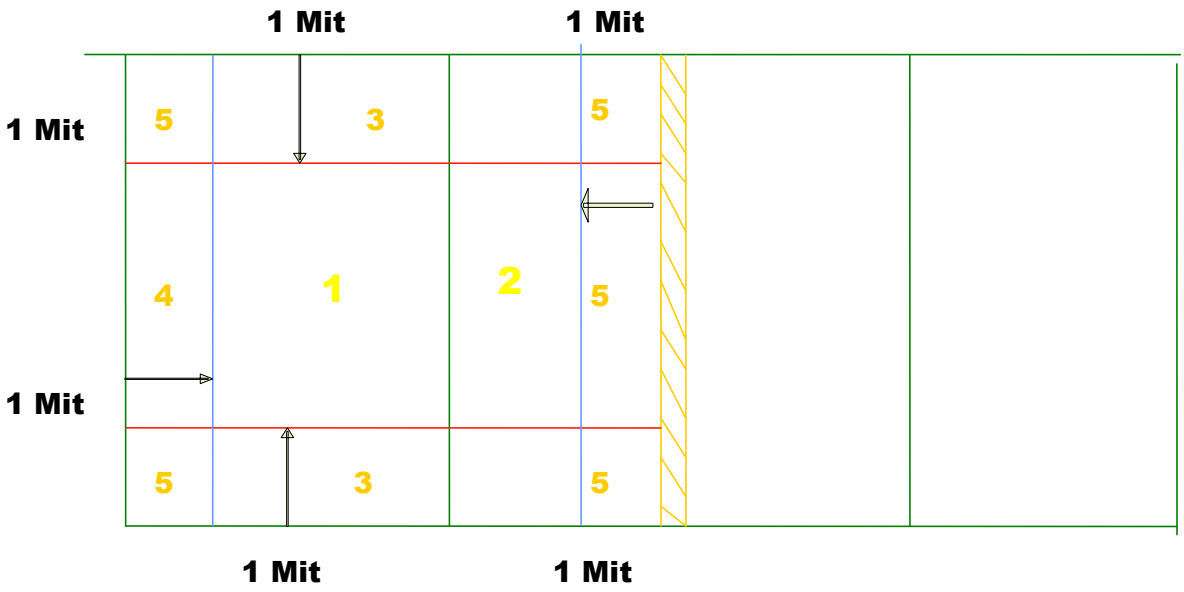
Purpose:- To measure the Accuracy, Co-ordination in Volleyball game.

Equipment:- Volleyball, Standard Volleyball court with marking, score sheet, Pen

Description: - For the test researcher used proper playing court of volleyball. Measurement of the court 9*18 mtr. For the study researcher will used one side of court. The court will be marked as per expert opinion and result of pilot study. From the base line one parallel horizontal line inside the court will be mark on 1 mtr. From the side line both side the vertical line will be mark on 1 mtr inside the court. From the center line one parallel line mark on 1mtr inside the court.

DIAGRAM OF TEST

YELLOW : - MARKS



2) **Underhand Pass Test:-**

Purpose:- To measure the Accuracy, Co-ordination in Volleyball game.

Equipment: - Volleyball, Ring equipment, Standard Volleyball court with marking, score sheet, Pen

Description: - For the test researcher used proper playing court of volleyball. Measurement of the court 9*18 mtr. For the study researcher will used one side of court. The court will be marked as per expert opinion and result of pilot study. In between the attack line and center line and Zone no 2 and Zone no 3 on setter position one round ring equipment will be situated From opponent side service will be performed after the service participant will return the service in to the ring. 10 attempt to one participant. Each Successive attempt count as a 1 point.

DIAGRAM OF TEST

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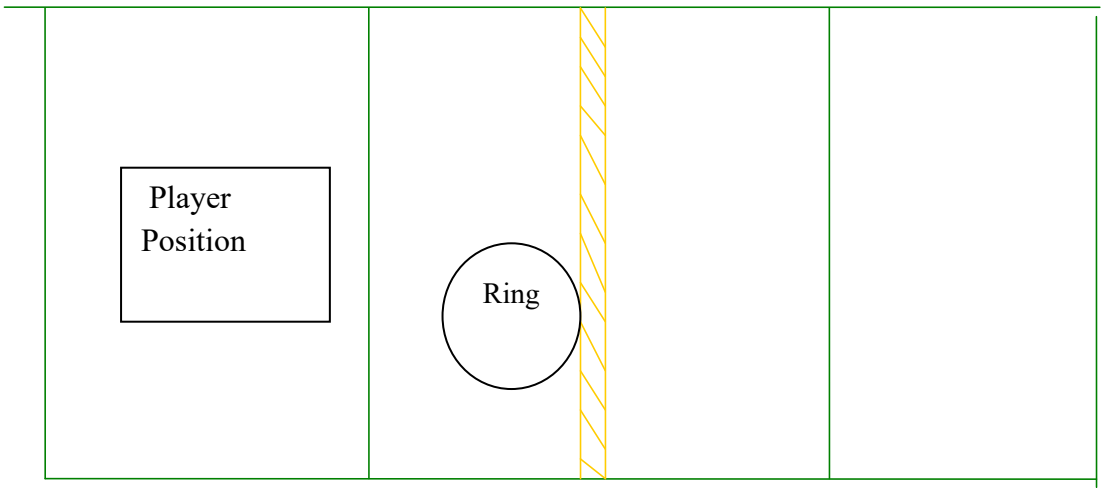


Scoring: - Each Successive attempt on court will be count and add after 10 attempts.

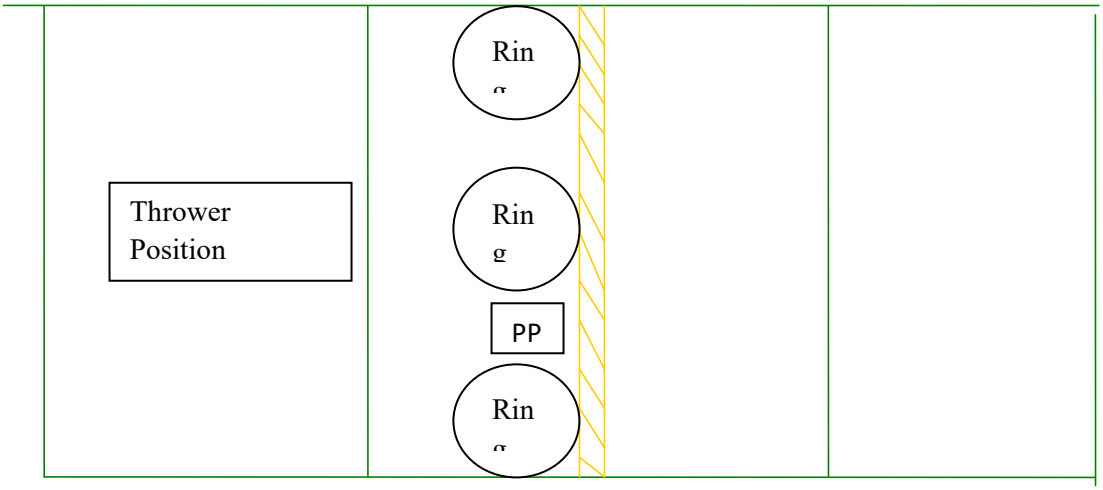
3) Upper hand Pass / Setting Test:-

Purpose: - To measure the Accuracy, Co-ordination in Volleyball game.

Equipment: - Volleyball, Ring equipment, Standard Volleyball court with marking, score sheet, Pen.

Description: - For the test researcher used proper playing court of volleyball. Measurement of the court 9*18 mtr. For the study researcher will used one side of court. The court will be marked as per expert opinion and result of pilot study. In between the attack line and center line and Zone no 2 and Zone no 3 on setter position participant will be situated at setter position. Assistant will be throw the ball towards the setter position participant will set the pass to 2 zone, 3, Zone, 4zone. There will be 3 rings at 2 zone, 3, Zone, 4zone. Researcher will be previously tell to participant that at which zone he will be set the ball. 15 attempt to one participant and 5 for each zone.

DIAGRAM OF TEST



4. Statistical Tools:-

Inferential statistics and descriptive statistical tools (Mean, Mode, Median, Corelation and ANOVA) will be employed.

5. Time Schedule:-

The present study will be period of two years and four months**.**

Sr. No	Activities	Estimated time
1	Study of related literature	5 Months
2	Experts opinion	1Months
3	Pilot study and correction	4 Months
4	Data collection	12 Months
5	Data analysis	3 Months
6	Conclusion and presentation	3 Months

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